

REMARKS**A. Status of the Claims and Explanation of the Amendments**

Of the 29 claims that were originally filed, claims 20-29 have been withdrawn from consideration, and claim 15 has been deleted. Accordingly, claims 1-14 and 16-19 are currently pending. Claims 1-3, 7-11, 13-14, and 18 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent 4,952,558 to Goertz et al. ("Goertz"). Furthermore, claims 4-6, 12, 15, and 18-19 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Goertz.

Applicants have amended claim 1 to further define the invention. The claims now include the additional steps of "cooling the slurry once to form a homogeneous solution" and "heating the slurry again to precipitate a copolymer." Support for these amendments is found throughout the specification, for example, at page 15, lines 1-12 and in original claim 15 (now incorporated into claim 1). Applicants respectfully submit that no new matter has been added by these amendments.

Additionally, the Office Action has objected to claims 16 and 17 for being dependent on a rejected base claim, but has indicated that the claims would be allowable if rewritten in independent format including all of the limitations of the base claim and any intervening claims. Accordingly, claim 16 has been amended such that it is now an independent claim that recites all of the limitations of claim 1 (prior to the new claim elements added by this paper). Accordingly, Applicants respectfully submit that claim 16 is now in condition for allowance. Similarly, claim 17, which depends from claim 16, is also in condition for allowance. Reconsideration and withdrawal of the objections to these claims is respectfully requested.

B. Goetz Does Not Teach, Disclose, or Suggest All of the
Claim Elements of Applicants' Amended Claim 1

Applicants respectfully traverse the rejection of claims 1-3, 7-11, 13-14, and 18 under 35 U.S.C. §102(b) as allegedly being anticipated by Goertz. Briefly, Goetz does not teach, disclose, or suggest all of the claim elements in Applicants' newly amended claim 1. Accordingly, the rejection is not well taken and should be withdrawn. [MPEP §2131].

The Office Action states that Goertz "discloses a method of preparing copolymer of anhydrides and alkyl vinyl ethers in the presence of a free radical initiator and an ester of not less than 5 carbon atoms as a solvent" [Office Action, ¶4]. The Office Action further observes that the "[p]rior art exemplifies first adding an alkyl acetate and maleic anhydride to a reactor until maleic anhydride is dissolved, subsequently adding a solution of methyl vinyl ether, and subsequently copolymer[izing] the mixture in the presence of an initiator at the boiling temperature of the ester solvent, resulting in a suspension product which meets the instant slurry product" [Office Action, ¶4]. The Office Action also claims that the "[p]rior art discloses and exemplifies using 0.01-2% by weight of a free radical initiator which meets the terms of the recited claims 9, 11, and 13" [Office Action, ¶4]. The Office Action also asserts that a "[s]uitable temperature range disclosed is from 30-150 °C, which encompasses the range expressed in claims 10 and 14" and that the "prior art exemplifies removing the solvent and drying at 50 °C which embraces the condition expressed in claim 18" [Office Action, ¶4].

However, Goertz fails to teach, disclose or suggest "a method for producing a copolymer of an alkyl vinyl ether and maleic anhydride" comprising, *inter alia*, the steps of "cooling the slurry once to form a homogeneous solution" and "heating the slurry again to precipitate a

copolymer” as recited in Applicants’ newly amended claim 1. Because not all of the claim elements are taught, the rejection of claim 1 is not well taken and should be withdrawn.

For similar reasons, claims 2, 3, 7-11, 13, 14, and 18, which depend directly or indirectly from claim 1, are not anticipated by Goertz. Applicants respectfully submit that these claims are also in condition for allowance and request reconsideration and withdrawal of the rejection of these claims under 35 U.S.C. § 102(b).

B. Claims 4-6, 12, and 18-19 are Not Obvious Over Goertz

Claims 4-6, 12, 15, and 18-19 stand rejected under 35 U.S.C. § 103(a) for allegedly being obvious over Goertz. Applicants have canceled claim 15, rendering the rejection of this claim moot. Additionally, Applicants respectfully traverse the rejection of claims 4-6, 12, and 18-19 for allegedly being obvious over Goertz.

Applicants note that newly amended claim 1 recites the additional steps of “cooling the slurry once to form a homogeneous solution” and “heating the slurry again to precipitate a copolymer.” As discussed above, nowhere does Goertz teach, disclose, or suggest these additional steps. Because not all claim elements are taught or suggested, a *prima facie* case of obviousness has not been established [MPEP § 2143.03]. For at least this reason, claims 4-6, 12, and 18-19, which depend directly or indirectly from claim 1, are not obvious over Goertz.

Moreover, Applicants respectfully assert that the process recited in claim 1 produces unexpected results. Specifically, Applicants submit that the step of “heating the slurry...to precipitate a copolymer” as recited in Applicants’ newly amended claim 1 would be considered an unexpected result to those of ordinary skill in the art. As is well known in the art, the solubility of a solute generally *increases* with temperature of the solvent. However, in the

present case, the act of heating the slurry actually causes the slurry to precipitate a copolymer, indicating a *decrease* in the solubility of a solute with increasing temperature.

For this reason, Applicants assert that claims 4-6, 12, and 18-19, which depend directly or indirectly from newly amended claim 1, are not obvious over Goertz. Applicants respectfully request reconsideration and withdrawal of the rejection of these claims under 35 U.S.C. §103(a).

CONCLUSIONS

For the foregoing reasons, it is respectfully submitted that the pending claims are in condition for allowance. In the event that a telephone conference would facilitate examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

Respectfully submitted,
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